

## RELIGIOUS READING.

### THE FIRST CHRISTMAS.

Out in the fields near Bethlehem,  
By night the Jewish shepherd  
Watched o'er his flock, lest upon them  
Might lion come, or leopard.  
There came no lion, but in the east,  
Amid the starlight splendor,  
All in surprise he saw arise  
A star of radiant splendor.

It could not be the evening star,  
That in the west was blazing;  
This in the east o'er Jordan  
Shone with a light amazing.  
Their eyes so oft had seen aloft  
Each flame-clad heavenly ranger,  
That each they knew by token true,  
But no one knew this stranger.

And while they looked with bated breath,  
And at the marvel wondered,  
And were it sign of life or death  
With growing terror pondered,  
Lo, suddenly, there seemed to be  
A door set open o'er them,  
And robed in white an angel bright  
Came down, and stood before them.

"Fear not, behold I bring," said he,  
"Good news to you and people that  
This heaven of glory under  
For word I bring that Christ, your King,  
In heavenly love and pity,  
This day on earth has had his birth  
In David's ancient city."

Then instantly it seemed as though  
The heavens were all on fire,  
And down there in rank and row,  
A glory-mantled choir,  
Who stood and sang till echo rang—  
So runs the ancient story—  
That peace again had come to men,  
And unto God all glory.

—A. R. Thompson, D. D., in S. S. Times.

### PRAYER WEEK.

Programme of the Evangelical Alliance  
for the Week of Prayer, Commencing  
January 3.

The following are the topics for exhortation and prayer, as arranged by the Alliance:

SUNDAY, JANUARY 3.  
Sermons—"Occupy till I come."—Luke 19:13.

MONDAY, JANUARY 4.  
Praise and Thanksgiving—For the Spirit of Prayer week, for the all the bounties of Providence; for God's long-suffering goodness in that He has not taken away His Holy Spirit from us on account of our little faith and many provocations; for His faithful promises in Christ Jesus; for continuing and multiplying opportunities of proclaiming His Gospel of grace; for the progress of Christian missions among Jews and Gentiles; and the free course of the Word of God in the world, notwithstanding all the opposition of infidelity and abounding iniquity.—Psa. 117: 2 Sam. 12:19. Psa. 118: 1 Chron. 29:10-15. Isaiah 61: 1-3. 1 Thess. 5: 1-3.

TUESDAY, JANUARY 5.  
Humiliation and Confession—National sins; social sins; personal sins. Want of appreciation of the love of Christ; hardness of heart; unfaithfulness and slothfulness in service; false shame in confessing the Name of Christ before men, and especially among our own class and kindred. Want of zeal in missionary work, both at home and abroad. Want of brotherly kindness and charity.—Isaiah 65: 1-2. Psa. 51: 1-3. Rom. 2: 28-31. Jer. 3: 12-23. 1 Thess. 5: 1-3.

WEDNESDAY, JANUARY 6.  
Home and Foreign Missions—For the revival and increase of a missionary spirit in the hearts of all who believe; for Home Missions and Evangelistic efforts—that more laborers, full of the spirit of love and power, may be sent forth; and that a great gathering of souls may take place; for Native Christians among the heathen; that they may be kept steadfast and zealous in seeking the salvation of their countrymen; for Missionaries and Teachers—that grace and wisdom may be given to them; for God's ancient people, Israel—that they may be brought into the faith of Christ, and for the maintenance of religious liberty in all lands.—Ezek. 37: 24-28. Rom. 11: 25-32. Joel 2: 21-32. Acts 13: 2-3. 1 Thess. 1: 1-3. Micah 4: 2-4.

THURSDAY, JANUARY 7.  
The Church and the Family—That the Church of Christ may be more united in the bonds of faith and love; that the love of the Head, which may grow with the increase of God; that it may be delivered from false apostles and wolves in sheep's clothing; that Christ may be all and in all in its teaching; that the grace and power of the Holy Spirit may rest more and more on Christian families; on all instructors and pupils in institutions of learning; on Sunday-schools and on Christian Associations of young men and young women.—Ephes. 4: 1-3. John 15: 1-3. John 17: 6-26. Col. 3: 1-17. 1 Cor. 12: 26. Gal. 5: 22-28. Ephes. 4: 1-3. 1 Thess. 5: 1-3.

FRIDAY, JANUARY 8.  
Nations and Governments—For justice and all in authority; for the spread of law and peace; for the defeat of malicious plots and conspiracies; for the manifestation of a Christian spirit between employers and employed; for the removal of all race and sectional prejudices; for the abolition of traffic in slaves, opium and intoxicating drinks; and all other immoral trades and practices; for a favorable reception of Christian missions by heathen nations and peoples; for the coming of Christ in His Kingdom.—1 Tim. 2: 1-4. Psa. 11: 2-3. 2 Thess. 2: 1-4. 1 Cor. 13: 1-3. Matt. 24: 21-31.

SATURDAY, JANUARY 9.  
The Christian Life—For the increase of Faith, Hope and Charity; for the deepening of our spiritual life in Christ and such confidence in Him as may fit us for being more used for our Saviour's glory; for more love to the Bible; for the better observance of the Lord's day and family worship; for the success of our efforts to prevent or cure intemperance; to relieve the sick and to rescue the perishing; for benevolent institutions and Christian work in all kinds.—Eph. 4: 1-3. Matt. 6: 1-13. Phil. 2: 1-16 and 4: 1-3. Rom. 12: 1-2. James 1: 2-4. 1 Peter 2: 1-10.

SERMONS.—"Let your loins be girded about, and your lights burning; and ye yourselves like unto men that wait for their Lord."—Luke 12: 35-38.

### THE MEANING OF THE MANGER.

"Sign," Not for the Shepherds Only, but for All Men, Everywhere, and in All Succeeding Time.

"He comes, His throne the manger;  
He comes, His shrine the stall.  
The ox and ass His courtiers,  
Who made and governed all."

We remember a birth, we celebrate the coming of a child. This is the distinctive meaning and special emphasis of the glad Christmas time. The event was humble and, for the most part, obscure. And yet no birth was ever so heralded. The insignia of royalty, the tokens of Divine Kingliness, were not wanting, indeed. But these flamed, and voiced and faded in the upper spaces. The angel of the annunciation uttered to the wondering shepherds his "good tidings of great joy," and certified them by a sign—"And this shall be a sign unto you; ye shall find the Babe wrapped in swaddling clothes, lying in a manger." The true purpose was to so announce the birth of the Messiah as to correct the false notion concerning Him held by the Jews, who were expecting a national deliverer. It was easy for them to dwell on the idea of the Messiah as bearing "upon His shoulders" the government, but not as "a man of sorrows and acquainted with grief." And, therefore, the angel's first announcement was such as to cause disappointment; but there was no shock to the faith of the shepherds, for in the humble royalty they saw the deeper sense of prophecy, and already may have discerned, at least in some dim way, the coming, suffering, humiliation and sacrifice. To them, at any rate, the sign accomplished its design in awakening their slumbering faith. They believed in Him, and published the tidings of His advent. And it is proper and appropriate to stand beside the cradle of the Christ during this Christmas time, and to note some of the characteristics of that hour from which the

## ALASKAN CREMATION.

An Interesting, Though Somewhat Startling, Ceremony.

We found the house of mourning a few doors further on, and heard the sound of the beating staff of the mourners as they kept time to their mournful singing. We opened the door and entered. The room had been put in order for the occasion and hung with draperies, the end opposite the door, where the dead man was set up, being hung with the American flag. About fifty Indians, men, women and children, were seated around in the space between the fire and the counter or platform that runs all around the room, clad in their best blankets and preserving a solemn decorum. The covers had been taken from the four gaily painted pillars or talam posts that stood at the corners of the central square in the room. The dead Indian, set up on the floor as if alive, was covered with a blanket, except his head, which wore a crown, and near by stood his mask and some other fixtures. His face was painted with red, and there was nothing ghastly or deathlike in its look. We remained for some time, and were kindly treated. I was told that the singing, shaking of rattles and beating of long sticks on the floor continues all night, and that when the time comes for cremating the body is usually taken out through the opening in the roof—never through the front door—and carried to the funeral pile. Although we were in attendance next morning at ten o'clock we were too late to see the initial proceedings, for we met the mourners with their long sticks returning from the fire, and when we reached it, beyond the ranche on the beach, the body was nearly consumed. A pile of wood, large sticks four or five feet long, had been laid up, on a cob-house-wise, and a smaller pile put inside, on which the body, wrapped in its blanket, was laid. Logs were then added, above the fire, crossing others at the corners and lighted. A very great heat was thus produced, and a few Indians in attendance used long poles to keep the burning sticks in place; some women were seated in the grass not far away. There was no odor, and complete decorum and decency so far as behavior was concerned. Still, I believe, some combat the cremating custom, which I think worthy of perpetuation. After the body is burnt, the ashes are gathered and put in a box or trunk, and deposited with the personal possessions in the tomb, which is erected over a spot in their cemetery, and consists of a small, square wooden house, the four sides of the roof running up to a peak; these toy houses, six to eight feet high, are gaily painted and present a really picturesque appearance. I tried one day to make my way through an old part of the cemetery, but I found myself in a regular jungle of bushes and undergrowth, and could make no headway. The old dead houses were falling into decay, and everything inside them had been stolen or had perished, and grass and weeds grew up inside almost to the house roofs. The canoes of the dead, that had been hauled up by the houses, had also rotted; ravens croaked on all sides—it was almost dismal and funeral.—Silka (Alaska) Cor. American Register.

The new alloy, known as "platinoid," is essentially nickel silver, with the addition of from one to two per cent. of tungsten. The color is white like silver, and the alloy retains a polish untarnished by exposure to the air for a long time. It is found, also, that it has a high degree of electrical resistance, with a small amount of variation in degree with changes of temperature; qualities which, it is claimed by electricians, render the alloy peculiarly suitable for the construction of galvanometers and resistance coils.—N. Y. Independent.

The improved kind of explosive known as cocoa powder is said to possess such superior value for many purposes that it has been introduced into the famous Krupp factory, in Germany. It is asserted that, with equal pressure, this substance gives greater velocity to a ball than can be attained with ordinary powder, while its smoke is found to be less dense and to clear off more quickly.

Towns are booming on Puget Sound. A letter received by a prominent real-estate dealer in Seattle from a friend now at Port Moody states that the whole peninsula bordering on Coal Harbor will be laid out in twenty-five foot town lots. The erection of Government works contemplated there will be at once entered upon. Vancouver, Granville and Port Moody are swarming with people.

A Boston paper is making public the fact that two men who were discovered by Thackeray to have brains as well as blood were Bostonians. The dull Thackeray, however, did not once suspect that it was the Boston diet that made these Boston men. In fact, Thackeray did not know beans.—Philadelphia Press.

Some one says that long walks will reduce obesity. There is an air of probability in the statement. There are no fat men among the members of the several stranded opera companies now counting railroad ties between Western towns and New York.—Newristown Herald.

Jimmy does the brains and get up the paper," said a country editor, in explaining to a subscriber how he worked things. "It is a pity Jimmy has been sick about so long," said the subscriber, as he counted out the last cabbage that that year's subscription.—Pittsburgh Chronicle-Telegraph.

Chicago girls are taking to crazy-quilt making for the winter. This is being done so that they will have indoor employment and thus keep them from going out and leaving huge foot-prints in the snow. Chicago girls are not as crazy as they appear.—Kentucky State Journal.

## MISSSES' DRESSES.

Pretty Dresses for Misses in Their Towns and School Girls.

There is a greater variety in the wool goods used for the dresses of misses in their teens than for the smaller dresses; for these the rage is from cashmere and camel's-hair to the roughest serges, homespun, bison cloths, bourettes, and Cheviots, with tricots and the smooth-faced Amazon cloths worn by ladies. Velvet and corduroy are liked for youthful toilettes, and there are elaborate combinations of silk with velvet or plush for gay occasions, but tasteful mothers prefer simple white muslin and wool dresses of light, delicate colors for school girls to wear at dinners, family parties, or in a box at the opera. Brown is a favorite color this season, rivalled only by the various shades of red, from the bright poppy red to dull wine-color. Self colors are preferred for misses, but there are many checks and stripes used, also large blocks and plaids of fancy colors for skirts to wear with plain colored waists. Basques with a vest, or else lapped to the left side at the top, and sloping thence to the waist line, are liked for misses. The soft gathered vest remains in favor for slender girls, and is crossed by a belt at the waist line. Jacket fronts, curved or sloped away, are on basques that are in longer position shape behind. The Eton jacket with vest and sash is a jaunty design for young girls. Plain basques with very high standing collar and military trimmings of braid crossing the front are for well-grown figures. The pleated and belted Norfolk jackets are made with kilt skirts, and also with draped skirts; this pleated jacket and the wool jersey waists are excellent garments in a school girl's outfit, as they may be worn with various skirts. Yoke waists fastened behind with pleats from yoke to belt are among the prettiest for girls, and are seen on their dark dresses for every day as well as on the lighter dresses for evening.

Short apron over-skirts are prettiest for young girls; the apron may be drawn across in many wrinkles, and its edges merely stitched or turned under, or by way of trimming a revers may be turned up on the left side in milkmaid fashion; the back is formed of a wide breadth pleated across the top and down one side, then sewed to the belt to drop in a point. The sash backs are also liked made of two wide loops and two ends of the dress goods doubled, and fringed across the straight ends. Sashes of ribbon of great width are worn with muslin or wool evening dresses.

Girls fourteen years old wear their skirts long enough to come within two inches of their shoes; those sixteen years old have them reach to their ankles. A good foundation skirt of alpaca is in most dresses, and the over-skirt and lower skirt are draped upon this. There is a pad bustle and a short steel spring across the back breadth in many dresses, but these must be very small, or they will be obtrusive and ungraceful. Extremely narrow and very wide kilt pleats are used for girls' skirts; others have wide double box pleats all around, with one passing up to the belt on the left side over the apron. Full gathered back breadths with braided panels on the sides and box pleated fronts are stylish skirts. Large buttons sometimes take the place of braid on the panels. A wide band of plush or of velvet, or many rows of Hercules braid, are placed around the pleated skirts of wool dresses.

White camel's-hair, veiling, surah, or milk dresses for evening are made with a Gretchen guimpe of embroidery or of lace and a full round tucked skirt, and are worn with a white watered or satin ribbon sash, or else one of bright Roman striped ribbon. A high pointed waist laid behind may be used for surah dresses with the wide sash bow and ends starting under the point behind. A dog-collar of velvet is tied in a high bow around the neck inside the lace frill, or there may be rows of beads forming a tight necklace. White plush, or white Astrakhan or swan's-down, is sometimes worn around the high collar and on the elbow sleeves of white wool dresses.—Harper's Bazar.

## TUBERCULOUS COWS.

A Claim That Their Affliction Can Be Transmitted Through Milk and Meat.

In a report recently addressed to the Town Council of Hull, Dr. Mason, Medical Officer of Health for the borough, expresses himself very strongly as to the results which may follow on the consumption of milk from tuberculous cows. His attention having been drawn to the fact of tuberculosis coming from milk cows, he visited a dairy, and having the support of a veterinary surgeon to the effect that the disease did actually exist in a cow, he gave instructions to the proprietor not to sell the milk for food, and obtained samples of the milk for microscopic and chemical examination; the cow was also kept under observation. The sputum was found to contain tubercular bacilli, and pus cells were visible in the milk. The milk, it is stated, was peculiar in containing a much larger proportion of fatty matter than is contained in healthy milk. The cow was finally purchased by Dr. Mason for fifty shillings; she was in an emaciated condition, and when slaughtered tubercles were found. The dura mater and lungs were in an advanced condition of tuberculosis, as were also the liver and some glands. Dr. Mason, having detailed these facts, goes on to assert that bovine tuberculosis is an infectious disease, which can be transmitted by the indigestion and inoculation of tuberculous matter, and by giving animals the flesh and milk of a tuberculous beast. Cows affected with tuberculosis are, he alleges, generally good milkers. The disease, he states, is hereditary and transmissible to the human species through the milk and flesh, should these articles be uncooked or insufficiently cooked.—Lancet.

There is a delightful touch of the condescension which the people of a superior civilization bestow upon inferiors in the remark of the visiting Japanese official who was taken to see "The Mikado" in New York the other night. "It is ridiculous to us Japanese," he said, "but I think it is amusing to you Americans."—N. Y. Times.

## HOG CHOLERA.

Official Directions for the Prevention and Cure of the Scourge.

The Massachusetts Commission on contagious diseases among domestic animals have issued the following letter to the public:

So many cases of sickness among swine have recently been reported, and so much alarm is felt by both feeders and consumers, that it is deemed advisable to acquaint the public with some of the facts regarding the swine distemper commonly called hog cholera, or the swine plague of modern veterinarians. The disease is not new. It used to be frequently found prevailing among the store swine driven from the Western States to the Eastern markets, and some years it was so prevalent at Brighton that many farmers were deterred from purchasing their supply of pigs for feeding at market, or from any of the droves which had come from the West.

As the feeding of hogs in the West has increased as an industry, this disease has also increased. It has been so destructive during the past ten years that the United States Government, through its Department of Agriculture, and otherwise, has expended freely for the services of experts to study and investigate it, and it is to the researches of such veterinarians as Drs. Law, Detmers and Salmon that we have learned what little is known regarding the nature of this disease.

All authorities agree that the disease (antrax, swine plague, hog cholera, or by whatever other name it may be called) is highly contagious, and that it owes its existence in any given locality, when found, to a seed planted, just as much as a field of corn or a patch of weeds by the roadside owe their existence to seed planted. By what means the germs of hog cholera are conveyed from one point to another in each particular case, it is not always easy to determine. It is possible that it may be carried upon the feet of rats or birds, which frequent swine pens and migrate from one locality to another. The excrements and the scabs from surface sores, when dried and ground to dust may be picked up and carried to considerable distances by strong winds, and find lodgment in localities favorable to the spread of the disease. Brooks and rivers may also carry the germs to localities down the stream.

But the investigations of the commission during the past few months in which the disease has prevailed in Massachusetts, point in but a single direction for its origin, and that to the Western hogs which are brought to our market weekly over the railroads. The disease has been unusually prevalent at some of the sources of supply during the past year, and the nature of the malady is such that it would be next to an impossibility to determine to a certainty at the shipping points that no hogs which had been exposed to the disease were being received with the healthy ones, nor is it always an easy matter on the arrival of the hogs at their destination to determine whether certain alling ones are affected with the disease or only weak from their long ride in crowded cars.

The most skillful veterinarian can not in many cases pronounce upon the disease without a post-mortem examination, and not always then till the intestines have been cut open and their inner surface exposed, a precaution not to be expected in ordinary practice at the abattoirs.

With scarcely an exception, thus far, no case of well-defined hog cholera has come to the notice of the Commissioners that could not be traced to diseased pork direct, or to city or other swill which probably contained it in some form or other. Beef has been high, pork low, and at the cheaper class of boarding-houses a large consumption of fresh pork would be expected. In preparing it for the pot or the oven any little bloody or discolored bits would naturally be trimmed off, and, with the skin in some cases, be thrown in the swill barrel, whence it goes to some farm in the country to be fed to swine. To allay any unreasonable fears concerning the use of Western pork, or any pork as an article of food, it should be stated that so far as known hog cholera is never taken by man; and further, that in case the germs of the disease may exist in a sample of pork, the heat required for thoroughly cooking it would in all probability render it safe food even for swine.

The obvious cautionary measures, therefore, to be recommended both to city consumers and farmers, are to guard the swill barrels from receiving any scraps or bits of raw pork or pork blood, from any source whatever. Farmers who collect swill should refuse to receive it except from such families as can be trusted in the matter; otherwise they should take the risk at their own peril.

If the disease breaks out in a herd, keep the herd completely isolated as long as danger exists. It is advisable to separate the sick from the apparently healthy, and to give the latter their food carbolic acid, ninety-five per cent., at the rate of ten drops to each one hundred and fifty pounds of live hog, three times a day. This is not expected to cure badly diseased animals, but it is believed will have a tendency to destroy germs that may obtain access to the food of feeding places. Pens where the disease has existed should be thoroughly cleaned and drenched with weak solutions of carbolic acid. The manure should be carted to the field and plowed in. A sandy soil is to be preferred, as favoring more rapid decomposition. Piling the manure and forking it over two or three times till it is thoroughly heated in all its parts will tend to destroy the germs of the disease. As freezing does not destroy, but only seems to render the germs still more virulent, it can not be deemed perfectly safe to introduce a new lot of healthy swine into pens where the disease has existed till several months have expired, and preferably not till after the heat of summer has had its purifying effect.

Bury all hogs dying from the disease deeply and securely against molestation by dogs or by other swine. The earth over a shallow burial may become an active source of contamination.

## USEFUL AND SUGGESTIVE.

There are produced annually in this country about 13,000,000 lambs.

If you wish to produce glue that will resist water, boil one pound of glue in two quarts of skimmed milk.—Exchange.

For sore eyes, dissolve fifteen grains of acetate of zinc in half a pint of soft water (rose water is the best) and apply it to the eyes several times a day.—Toledo Blade.

A New Jersey lady took the late clippings from her lawn, pressed them into a tight box, covered and weighted the same, making a miniature silo. The silage is for her hens this winter, when they will be hankering after green food.

It will be profitable to keep a supply of fine, flexible wire, twine, tacks, brads, different sized nails, screws, etc., for the purpose of making immediate repairs. The lack of five cents' worth of material has often caused a dollar's expense.—N. Y. Times.

A Colorado paper says that "the cow may be a queen, the horse king, and the sheep away up in royal honors, but it is an indisputable fact that the hog, under the impetus of alfalfa and pea food, is approaching dangerously near the throne."

A New Hampshire man keeps five hundred fowls, all healthy and good layers. He scatters them over his farm, which is four hundred acres in extent, in flocks of twenty-five to fifty, providing for each a cheap house 9x13 feet. Their broad range is the secret of his success.

There are 285,000,000 acres of improved land in the United States, 450,000,000 of forest, and 730,000,000 acres of unimproved and waste timbered land. Forests are disappearing at the rate of 25,000,000 acres each year. The forest product during the last census year was 18,000,000,000 feet board measure; a year ago it was 28,000,000,000 feet.

To Trap Rats: Set a steel trap in the place where the rodents most do congregate and spread over it a piece of thin white muslin about two feet square; over the muslin spread cake and cheese crumbs. Having no fear of evil from a white cloth, in eating the crumbs the rats are sure to get into the trap, and the cloth does not prevent the trap from holding them.—Rural New Yorker.

An agricultural college which has been experimenting with poultry, says: In seeking to improve the common barn-yard fowls of the country by crossing with the pure races, a great mistake was made, the crosses or grades proving inferior to either parent. Common fowls may be vastly improved by careful selection in breeding, and the pure races can be kept up to the standard by avoiding in-and-in breeding, but the attempt to improve by crossing has never been satisfactory.—Chicago Tribune.

Cracker Pudding: Three eggs, one-half cracker crumbs, one-half cup of sugar, one tablespoonful butter, one cup of milk, one-half of a lemon—juice and grated peel, three tablespoonfuls of jam. Heat milk and crumbs together until scalding. Turn out to cool, while you rub butter and sugar to a cream, adding the lemon. Stir in beaten yolks, soaked cracker and milk, at last the whites. Butter bake dish, put jam at the bottom, fill up with the mixture and bake, covered, one-half hour, then brown. Eat cold with sifted sugar on top, or, if you like, put a meringue over it before taking from oven.—The Household.

READ AND REFLECT.  
Why Some Farmers Fail in Everything They Undertake.

They will not make compost.  
They breed to and from scrubs.  
They do not curdy their horses.  
They have no shelter for stock.  
They put off greasing the wagon.  
They are wedded to old methods.  
They give no attention to details.  
They have no method or system.  
They see no good in a new thing.  
They let their fowls roost in trees.  
They weigh and measure stingily.  
They leave their plows in the field.  
They hang their harness in the dust.  
They take no pleasure in their work.  
They never use paint on the farm.  
They prep the barn door with a rail.  
They milk the cows late in the day.  
They starve the calf and milk the cow.  
They think small things not important.  
They let their gates sag and fall down.  
They do not keep up with improvements.  
They don't know the best is the cheapest.  
They do not read the best books and newspapers.

They think the buyer of a successful neighbor's stock at good prices is a fool, and the seller very "lucky."  
They sell hay, grain and straw off the farm instead of turning them into meat, cheese and butter, and increasing their supply of manure.—Farm and Home.

## MIXING FEEDS.

An Important Work The Principles of Which Are Understood by But Few.

The principle of mixing feeds is a matter that most farmers know very little about. The general principle running all through the art of feeding is that there are two objects to be obtained—one to make bone and muscle and the other to make fat. The former are called carb-hydrates and the latter albuminoids. Thus we have classed as carb-hydrates, hay, straw, cornstalks and other roughness, while the albuminoids are bran, oil-meal and ground feed generally for making fat and muscle. In the well-balanced ration there should be mixed in the ratio of 12 1-2 pounds of the former to 2 1-2 pounds of the latter. Hiram Smith, an excellent authority, says: "All animals of about 1,000 pounds in weight should have daily twenty-four pounds of dry organic food substance, which means thirty pounds in ordinary condition." From this formula the farmer can classify the stock feed he has on hand, and make up his ration in the proportions generally set out above. This is generally done correctly from long experience, but it is well to know something of the reason of things which may account for some errors that experience has not been able to explain.—American Dairyman.